ABSTRACT

Title

Relationship of platelet distribution width and white blood cell count on admission with ST-segment resolution in patients with ST-segment elevation myocardial infarction thrombolysed with streptokinase.

Background and objectives

There is an alarming rise in the incidence of coronary artery heart disease, ST-segment Elevation Myocardial Infarction (STEMI) being one among them. ST segment resolution (STR) in an electrocardiogram is one of the most effective way to analyse the reperfusion after thrombolysis.. Here in our study, we try to analyse the relationship between ST-segment resolution (which predicts the success of thrombolysis) and two parameters – 1. Platelet Distribution Width (PDW) and 2. White blood cell count WBC-count) on admission in patients with STEMI.

Materials and methodology

We studied 100 patients admitted to Coimbatore Medical College Hospital with STEMI who are treated with streptokinase. Blood samples are taken for PDW and WBC-count on admission. A repeat electrocardiogram is taken 60 minutes after thrombolysis and the ST-segment resolution is calculated. More than 50% resolution is considered as successful thrombolysis. Patients are divided into groups as PDW more than and less than 12.85 and WBC-count more than and less than 12650 cells per microlitre.

Results

PDW and ST segment resolution with a p value of <0.001 and WBC-count and ST segment resolution with a p valute of <0.001 were found to be statistically significant.

Conclusion

PDW and WBC-count can be used to prognosticate and risk stratify patients with STEMI thrombolysed with streptokinase.